Engineering Interpretations

Chemical Properties

This table shows estimates of some characteristics and features that affect soil behavior. These estimates are given for the major layers of each soil in the survey area. The estimates are based on field observations and on test data for these and similar soils.

Properties

DEPTH to the upper and lower boundaries of each layer is indicated.

SOIL REACTION is a measure of acidity or alkalinity and is expressed as a range in pH values. The range in pH of each major horizon is based on many field tests. For many soils, values have been verified by laboratory.

SALINITY is a measure of soluble salts in the soil at saturation. It is expressed as the electrical conductivity of the saturation extract, in millimhos per centimeter at 25 degrees C. Estimates are based on field and laboratory measurements at typical sites of nonirrigated soils.

This subsection includes:

• (a) Chemical Properties

Map symbol and soil name	Depth	Cation exchange capacity 	Effective cation exchange capacity	Soil reaction	Calcium carbon- ate	Gypsum 	Salinity	Sodium adsorp- tion ratio
	In	meq/100 g	 meq/100 g	рН	Pct	Pct	mmhos/cm	
 Aa:								
QUARRIES, MADE LAND,-						j		
BaD:								
BALLTOWN	0-16	10-18		7.4-7.8	1-5	j		j
	16-20				ļ ļ	j		j
BcB:								
BARCO	0-16	6.0-11	i	5.1-7.3	i i	j		j
İ	16-31	9.0-18	i	5.1-5.5	i i	j		j
į	31-35	9.0-18	i	5.1-5.5	i i	j		j
	35-39				ļ ļ	j		
BcB2:								
BARCO, ERODED	0-16	6.0-11		5.1-7.3	i i			i
, i	16-31	9.0-18		5.1-5.5	i i			i
i	31-35	9.0-18		5.1-5.5	i i			i
	35-39					į		
 BcC:								
BARCO	0-16	6.0-11		5.1-7.3	i i			
	16-31	9.0-18		5.1-5.5				
	31-35	9.0-18		5.1-5.5				
	35-39							
 BcC2:								
BARCO, ERODED	0-16	6.0-11		5.1-7.3				
	16-31	9.0-18		5.1-5.5				
i	31-35	9.0-18		5.1-5.5				
i	35-39							

Map symbol and soil name	Depth	Cation exchange capacity 	Effective cation exchange capacity	Soil reaction 	Calcium carbon- ate	Gypsum	Salinity	Sodium adsorp- tion ratio
	In	meq/100 g	meq/100 g		Pct	Pct	mmhos/cm	-
dB:	 		 		 			
BARDEN	0-12			5.1-5.5				
	12-35			5.1-5.5	i i			i
	35-55		i	6.1-7.3	i i			j
	55-60	ļ	ļ		ļ ļ			
dB2:	 	 	 		 			
BARDEN, ERODED	0-12		i	5.1-5.5	i i			j
	12-35		j	5.1-5.5	i i	i		j
	35-55		j	6.1-7.3	i i			j
	55-60							
oB:	 	 	 		 			
BOLIVAR	0-12	6.0-12		5.6-6.5	i i			i
	12-27		10-18	4.5-6.0	i i			j
	27-35		10-18	4.5-5.0	i i			j
	35-39	ļ	ļ		ļ ļ			ļ
oB2:	 	 			 			
BOLIVAR, ERODED	0-12	6.0-12	i	5.6-6.5	i i			j
	12-27	i	10-18	4.5-6.0	i i			j
	27-35		10-18	4.5-5.0	i i	i		j
	35-39	ļ	ļ		ļ ļ			ļ
oC:	 	[[
BOLIVAR	0-12	6.0-12	i	5.6-6.5	j i			j
	12-27	i	10-18	4.5-6.0	i i	i		j
	27-35	j	10-18	4.5-5.0	j j			j
	35-39	i	i		i i			

Map symbol and soil name	Depth	Cation exchange capacity 	Effective cation exchange capacity	Soil reaction 	Calcium carbon- ate	Gypsum 	Salinity	Sodium adsorp- tion ratio
	 In	meq/100 g	 meq/100 g	 pH	Pct	Pct	mmhos/cm	_
BoC2:			 					
BOLIVAR, ERODED	0-12	6.0-12		5.6-6.5				
2022(1111), 2110222	12-27		10-18	4.5-6.0				
	27-35		10-18	4.5-5.0	i i	i		
	35-39				ļ į	į		ļ
BsB:								
BRONAUGH	0-7			5.6-6.0	i i			
	7-52		i	5.6-6.0	i i	i		
					ļ j			ļ
Ce: CLEORA, FREQUENTLY	 	 	 		 			
FLOODED	0-37			5.6-6.0				
	37-60			5.6-6.0				
CoC:								
COWETA	0-14		j	5.6-6.0	j j	j		i
	14-35							
CrD:	 		 	 		 		
COWETA	0-12	i	j	5.6-6.0	i i	j		j
	12-24	i	j		j j	j		j
			j		ļ ļ			j
DuB:	[
DUBBS	0-11		i	6.6-7.3	i i	i		j
	11-49	i	j	5.1-7.3	j j	j		j
	49-66	i	j	5.1-5.5	j j	j		

Vernon County, Missouri Chemical Properties of the Soils

Map symbol and soil name	Depth 	Cation exchange capacity 	Effective cation exchange capacity	Soil reaction 	Calcium carbon- ate	Gypsum 	Salinity	Sodium adsorp- tion ratio
	 In	meq/100 g	 meq/100 g	 pH	Pct	Pct	mmhos/cm	_
EdD:	 			 				
ELDON VARIANT	0-14	10-16		5.6-6.5	i i			
	14-28	18-40		5.6-6.5	i i			
	28-51	16-25		6.6-7.3	i i			
	51-55							
HcD:	 			 				
HECTOR	0-6	5.0-15		4.5-6.0				
	6-14	5.0-15		4.5-6.0	i i			
	14-16							
HeD:	 		 	 				
HECTOR	l l 0-6	5.0-15		4.5-6.0				
	6-15	5.0-15	i	4.5-6.0				
	15-16							
HeE:	 		 	 				
HECTOR	l l 0-6	5.0-15	i	4.5-6.0				
	6-15	5.0-15	i	4.5-6.0				
	15-16							
Hm:	 			 				
HEPLER, OCCASIONALLY			İ					i
FLOODED	0-6	5.0-10	i	5.1-7.3				
	6-25	5.0-10	i	5.1-7.3				
	25-50	1.0-5.0	i	5.1-6.5				
	50-70	5.0-10	i	5.1-6.5				

Map symbol and soil name	Depth	Cation exchange capacity 	Effective cation exchange capacity	Soil reaction 	Calcium carbon- ate	Gypsum 	Salinity	Sodium adsorp- tion ratio
	In	meq/100 g	meq/100 g	 pH	Pct	Pct	mmhos/cm	_
p:			 	 				
HEPLER, OCCASIONALLY			! 	! 		i		
FLOODED, OVERWASH	0-6	5.0-10		5.1-7.3				
İ	6-25	5.0-10	j	5.1-7.3	i i	j		
	25-50	1.0-5.0		5.1-6.5				
	50-70	5.0-10		5.1-6.5				
r: HEPLER, OCCASIONALLY		 	 	 	 			
FLOODED	0-6	5.0-10	j	5.1-7.3	i i	j		
	6-25	5.0-10		5.1-7.3				
	25-50	1.0-5.0		5.1-6.5				
	50-70	5.0-10		5.1-6.5				
RADLEY, OCCASIONALLY FLOODED	0-13		 	 6.6-7.8	 			
	13-62			6.1-7.3				
a: LANTON, OCCASIONALLY		 	 	 	 			
FLOODED	0-5			6.1-7.3				
	5-31			6.1-7.3				
	31-60			6.1-7.3				
eB:								
LIBERAL	0-9		11-16	5.1-5.5				
	9-20		15-20	5.1-5.5				
	20-43 >43		15-20	5.6-8.4 				

Vernon County, Missouri Chemical Properties of the Soils

Map symbol and soil name	Depth 	Cation exchange capacity 	Effective cation exchange capacity	Soil reaction 	Calcium carbon- ate	Gypsum 	Salinity	Sodium adsorp- tion ratio
	 In	meq/100 g	 meq/100 g	 pH	Pct	Pct	mmhos/cm	_
LmC2:	 							
LIBERAL, ERODED	0-9		11-16	5.1-5.5	i i			
,	9-20		15-20	5.1-5.5	i i			
	20-43	i	15-20	5.6-8.4	i i			j
	>43							ļ
LoD:	 							
LIBERAL	0-9		11-16	5.1-5.5	i i			
	9-20		15-20	5.1-5.5	i i			i
	20-43	i	15-20	5.6-8.4	i i			j
	>43							
COWETA	 0-14		 	 5.6-6.0				
	14-35							
BARCO	 0-16	6.0-11		 5.1-7.3				
Bintee	16-31	9.0-18	i	5.1-5.5				
	31-35	9.0-18		5.1-5.5				
	35-39							
LuB:	 							
LULA	 0-12		 	l 5.6-7.8				
	12-43			5.6-7.8				
	43-46							
Ma:	 		 					
MAYES	 0-19		 	 5.6-6.5				
1.11.11.00	19-74		 	6.6-7.3				

Map symbol and soil name	Depth 	Cation exchange capacity 	Effective cation exchange capacity	Soil reaction 	Calcium carbon- ate	Gypsum 	Salinity	Sodium adsorp- tion ratio
	 In	meq/100 g	meq/100 g	 pH	Pct	Pct	mmhos/cm	_
ſp:				 				
DUMPS						j		
MINE PITS								
s:				 	 			
OSAGE, OCCASIONALLY FLOODED	0-15	18-35		 5.1-8.4	 			
FHOODED	15-67	16-25		5.1-8.4				
Pa:	 		 	 	 			
PARSONS	0-13			6.1-7.8	i i			
	13-38		i	5.6-6.0	i i	i		
	38-70		j	5.6-6.0	j j	j		
a:				 				
RADLEY, OCCASIONALLY						ļ		
FLOODED				6.6-7.8				
	13-62 			6.1-7.3 				
pE3: RADLEY, OCCASIONALLY			 	 		ļ		į
FLOODED	0-13		i	6.6-7.8				
	13-62			6.1-7.3				
BARDEN, SEVERELY			 	 				
ERODED	0-12		i	5.1-5.5	i i	j		j
	12-35		i	5.1-5.5	i i	j		j
	35-55		j	6.1-7.3	i i	j		j
	55-60	i	j	i	i i	İ		

Vernon County, Missouri Chemical Properties of the Soils

Map symbol and soil name 	Depth	Cation exchange capacity 	Effective cation exchange capacity	Soil reaction 	Calcium carbon- ate 	Gypsum 	Salinity	Sodium adsorp- tion ratio
	In	meq/100 g	meq/100 g	рН	Pct	Pct	mmhos/cm	
RpE3: (cont.) PARSONS, SEVERELY		 	 	 	 	 		
ERODED	0-13			6.1-7.8				
1	13-38			5.6-6.0				
Į.	38-70			5.6-6.0				
Ve: VERDIGRIS, OCCASIONALLY FLOODED	0-40 40-60	 	 	 5.6-7.3 5.6-7.3	 	 		
W: WATER		 	 	 	 			
ZaB:		 	 	 	 			
ZAAR	0-13			5.6-7.3				
	13-48			5.6-7.3				
į	48-70	i		5.6-7.3	i i			
ZaC:				 				
ZAAR	0-13	l 	l l –––	 5.6-7.3		l		1
ламд	13-48	 	 	5.6-7.3				
1	48-70	 	 	5.6-7.3	 			
	10 / 0			3.0 7.3				